In the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

1.   (Original) A method for controlling a stepper motor in a video surveillance camera dome, comprising: decoding a command for a camera action; setting a state of a state machine based upon a decoded command; instructing a position control process and a speed control process based upon the state of said state machine, said speed control process sending a speed control signal to said position control process; sending a drive signal from said position control process to a motor current process and a phase control process to generate current and phase signals to control the stepper motor.

2.   (Original) The method of claim 1 wherein said state machine includes a manual mode in which instructions to said position control process and said speed control process include camera speed and direction.

3.   (Original) The method of claim 1 wherein said state machine includes a target mode in which instructions to said position control process and said speed control process include a desired camera location.

4.   (Original) The method of claim 1 wherein the stepper motor is controlled with a non-linear drive current.

5.   (Original) The method of claim 4 wherein said speed control signal includes ramp up and ramp down speed control for gradually increasing motor speed and gradually decreasing motor speed, respectively.

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6.   (Original) A method for detecting a plurality of pan positions in a stepper motor driven panable video surveillance camera of the type having a home sensor and detector to detect a home pan position and setting a pan motor step count to a known value at the home position, comprising : placing a plurality of position sensors and a home sensor in a spaced relation on a slip ring assembly of the panable video surveillance camera; detecting each of said position sensors and said home sensor by a detector positioned in a preselected location during panning of the video surveillance camera, each of said position sensors and said home sensor having an associated desired pan motor step count when detected; resetting the pan motor step count to the desired motor step count at each of said position sensor locations and said home sensor location when detected, wherein during panning of the video surveillance camera where the camera is not panned through a full pan range of motion to detect the home sensor, at least one of said position sensors is detected and used to reset the pan motor step count to the desired pan motor step count.

7.   (Original) The method of claim 6 further comprising: determining the difference between the desired pan motor step count and the pan motor step count at each of said position sensor locations and said home sensor location when detected; storing the difference in the desired step count to the motor step count at each of said position sensor locations and said home sensor location when detected.

8.   (Original) A method for detecting a plurality of tilt positions in a stepper motor driven tiltable video surveillance camera of the type having a home sensor and detector to detect a home tilt position and setting a tilt motor step count to a known value at the home position, comprising: placing a plurality of position sensors and a home sensor in a spaced relation on a tilt assembly of the tiltable video surveillance camera; detecting each of said position sensors and said home sensor by a detector positioned in a preselected location during tilting of the video surveillance camera, each of said position sensors and said home sensor having an associated desired tilt motor step count when detected; resetting the tilt motor step count to the desired motor step count at each of said position sensor locations and said home sensor location when detected,

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wherein during tilting of the video surveillance camera where the camera is not tilted through a full tilt range of motion to detect the home sensor, at least one of said position sensors is detected and used to reset the tilt motor step count to the desired tilt motor step count.

9.   (Original) The method of claim 8 further comprising: determining the difference between the desired tilt motor step count and the tilt motor step count at each of said position sensor locations and said home sensor location when detected; storing the difference in the desired step count to the motor step count at each of said position sensor locations and said home sensor location when detected.

Claims 10-11. (Canceled)

12.   (Original) An apparatus for controlling a stepper motor in a video surveillance camera dome, comprising: means for decoding a command for a camera action; means for setting a state of a state machine based upon a decoded command; means for instructing a position control process and a speed control process based upon the state of said state machine, said speed control process sending a speed control signal to said position control process; means for sending a drive signal from said position control process to a motor current process and a phase control process to generate current and phase signals to control the stepper motor.

13. (Original) The apparatus of claim 12 wherein said state machine includes a manual mode in which instructions to said position control process and said speed control process include camera speed and direction.

14. (Original) The apparatus of claim 12 wherein said state machine includes a target mode in which instructions to said position control process and said speed control process include a desired camera location.

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15. (Original) The apparatus of claim 12 wherein the stepper motor is controlled with a non-linear drive current.

16. (Original) The apparatus of claim 15 wherein said speed control signal includes ramp up and ramp down speed control for gradually increasing motor speed and gradually decreasing motor speed, respectively.

17. (Original) An apparatus for detecting a plurality of pan positions in a stepper motor driven panable video surveillance camera of the type having a home sensor and detector to detect a home pan position and setting a pan motor step count to a known value at the home position, comprising: means for placing a plurality of position sensors and a home sensor in a spaced relation on a slip ring assembly of the panable video surveillance camera; means for detecting each of said position sensors and said home sensor by a detector positioned in a preselected location during panning of the video surveillance camera, each of said position sensors and said home sensor having an associated desired pan motor step count when detected; means for resetting the pan motor step count to the desired motor step count at each of said position sensor locations and said home sensor location when detected, wherein during panning of the video surveillance camera where the camera is not panned through a full pan range of motion to detect the home sensor, at least one of said position sensors is detected and used to reset the pan motor step count to the desired pan motor step count.

18. (Original) The apparatus of claim 17 further comprising: means for determining the difference between the desired pan motor step count and the pan motor step count at each of said position sensor locations and said home sensor location when detected; means for storing the difference in the desired step count to the motor step count at each of said position sensor locations and said home sensor location when detected.

19. (Original) The apparatus of claim 17 wherein said means for resetting the pan motor step count to the desired motor step is performed in a complex programmable logic device.

20.   (Original) An apparatus for detecting a plurality of tilt positions in a stepper motor driven tiltable video surveillance camera of the type having a home sensor and detector to detect a home tilt position and setting a tilt motor step count to a known value at the home position, comprising: means for placing a plurality of position sensors and a home sensor in a spaced relation on a tilt assembly of the tiltable video surveillance camera; means for detecting each of said position sensors and said home sensor by a detector positioned in a preselected location during tilting of the video surveillance camera, each of said position sensors and said home sensor having an associated desired tilt motor step count when detected; means for resetting the tilt motor step count to the desired motor step count at each of said position sensor locations and said home sensor location when detected, wherein during tilting of the video surveillance camera where the camera is not tilted through a full tilt range of motion to detect the home sensor, at least one of said position sensors is detected and used to reset the tilt motor step count to the desired tilt motor step count.

21.   (Original) The apparatus of claim 20 further comprising: means for determining the difference between the desired tilt motor step count and the tilt motor step count at each of said position sensor locations and said home sensor location when detected; means for storing the difference in the desired step count to the motor step count at each of said position sensor locations and said home sensor location when detected.

22.   (Original) The apparatus of claim 20 wherein said means for resetting the tilt motor step count to the desired motor step is performed in a complex programmable logic device.

Claims 23-24. (Canceled)